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11 May 1961

MEMORANDUM FOR : Chief, ADPRS/MGT/S

SUBJECT : Order for IIM 1410 System

1. Attached is a memorandum for the Procurement Division, OL, requesting that the order for an IIM 1401 system previously approved by your office be canceled, and that an order for an IIM 1410 system be substituted.

2. The following are our reasons for this change:

a. The purposes of both systems are to convert the present G50 Locator application to a more efficient, less costly system, and to provide the basis on which our Main Index will be built. Present indications are that the 1401 does not have the processing speed necessary for the Index, but that the 1410 may have.

b. The 1410 system has more powerful commands and more flexibility in its move instructions.

c. The 1410 has the possibility of core storage five times as great as that of the 1401.

d. Another important factor in this change is the future availability of the as yet unannounced (and therefore "Company Confidential") Advanced Disk File (ADF). Indications given to us on the characteristics of the ADF are that:

(1) The ADF will be announced for the 1410 and not the 1401.

(2) The per million character storage cost of the ADF will be slightly lower than that of the present 1405.

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(3) The ADF will be available in time for the expected delivery of this 1410 system (January 1962).

(4) There will be a capacity of five ADFs per system as compared with five 1405s per system. This would give the 1410 system two and one-half million characters of random access storage as compared with one million for the 1401.

(5) The ADF will have a reading head for each disk surface, thus considerably reducing the seek time for records.

(6) Because of this reduced seek time and computing overlap with seek time, it is expected that the time to process the Locator, as now constituted, will be reduced by almost one-third. This will free the system to provide prime shift time for other applications. This is not true for the 650, which is used eight hours per day on the Locator and it is estimated that this cannot be materially reduced on a 1401 RAMAC system.

(7) The delay in the delivery of the Index means that our Document Retrieval System will be delivered substantially in advance of the very large capacity memory. For the system to function in the meantime we will need a large random access memory to store document machine addresses. We will need a 60 million character capacity by the time of the delivery of the Document Files, increasing to approximately 90 million before the delivery of the Index.

e. The 1410 system will allow us to simulate Index programming. Machine language for this purpose is available.

f. The increased cost of the 1410 system over the 1401 system of \$2,000 per month should be more than offset by the increased availability of prime shift time alone.

3. Since the ADF has not been announced, it is necessary to order the 1410 system with the 1405 Disk Storage. When the ADF is available, it is our intention to change from the two present models with 40 million storage to two models of the ADF with 50 million storage, to be further increased as necessary.

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4. Your approval is requested.



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Assistant Executive Officer
DD/F

Attachment - a/s

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